

Title (en)
Conductive connecting structure.

Title (de)
Leitfähige Verbindungsstruktur.

Title (fr)
Structure de connexion conductrice.

Publication
EP 0413161 B1 19950308 (EN)

Application
EP 90113759 A 19900718

Priority

- JP 4431990 A 19900227
- JP 20963889 A 19890815

Abstract (en)
[origin: EP0413161A1] A conductive connecting structure for electrically connecting first and second electronic parts (1, 9) each having a plurality of connecting terminals (8, 16) arranged at a small pitch is disclosed. A conductive bonding agent (17) is interposed between the plurality of connecting terminals of the first and second electronic parts (1, 9). The conductive bonding agent (17) is prepared by mixing a plurality of fine connecting particles (21) in an insulating adhesive (22). Each fine connecting particle (21) is designed such that a fine insulating particle (18) with a plating layer (19) formed on its surface is covered with an insulating layer (20) consisting of a material which is broken upon thermocompression bonding. When the conductive bonding agent (17) is subjected to thermocompression bonding between the connecting terminals (8, 16) of the first and second electronic parts (1, 9), portions of the fine connecting particles (21) which are urged by the respective fine connecting terminals (8, 16) are broken. However, the insulating layers (20) of the fine connecting particles (21) in the planar direction are not broken and remain as they are. In this conductive connecting structure, even if the ratio of fine connecting particles (21) is increased, and adjacent fine connecting particles (21) are brought into contact with each other, insulating properties can be kept in the planar direction, while conduction is obtained only in the direction of thickness.

IPC 1-7
H01R 4/04

IPC 8 full level
H01R 4/04 (2006.01); **G02F 1/13** (2006.01); **G02F 1/1339** (2006.01); **H05K 3/32** (2006.01); **H05K 3/36** (2006.01)

CPC (source: EP KR)
H01R 4/00 (2013.01 - KR); **H01R 4/04** (2013.01 - EP); **G02F 1/1339** (2013.01 - EP); **G02F 1/13452** (2013.01 - EP); **H01R 12/57** (2013.01 - EP); **H05K 3/323** (2013.01 - EP); **H05K 3/361** (2013.01 - EP); **H05K 2201/0212** (2013.01 - EP); **H05K 2201/0221** (2013.01 - EP); **H05K 2201/0224** (2013.01 - EP); **H05K 2201/0233** (2013.01 - EP); **H05K 2201/09036** (2013.01 - EP); **H05K 2201/10681** (2013.01 - EP)

Cited by
EP1686414A4; EP2020836A1; US6787233B1; US7453544B2; WO2005027147A1

Designated contracting state (EPC)
DE GB

DOCDB simple family (publication)
EP 0413161 A1 19910220; **EP 0413161 B1 19950308**; DE 69017553 D1 19950413; DE 69017553 T2 19951214; KR 910005518 A 19910330; KR 940001260 B1 19940218

DOCDB simple family (application)
EP 90113759 A 19900718; DE 69017553 T 19900718; KR 900012470 A 19900813